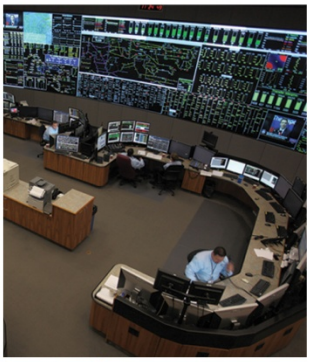
NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION



Media Release

Grid Planners, Operators Manage Transformation, Security of Bulk Power System

June 19, 2019

ATLANTA – The electricity industry is undergoing significant change, which presents both new challenges and opportunities for the reliability and security of the bulk power system. While ongoing performance measures show positive trends in generation, transmission, and protection and control performance, NERC's *2019 State of Reliability* encourages continued vigilance as the evolving resource mix and cyber and physical security threats continue to present critical challenges.

This year's assessment identified seven key findings, with extreme weather events being identified as the leading contributors to transmission, generation and load loss. Weather was responsible for the two category 3 bulk power system events across the Electric Reliability Organization Enterprise's footprint in 2018, the report finds.

"By nearly every measure we use to evaluate reliability, it is clear that the state of North America's bulk power system remains highly reliable," said John Moura, director of Reliability Assessment. "While year-over-year performance of the bulk power system shows positive trends, a strong reliability posture is needed to manage the emerging challenges as a result of the changing resource mix."

The report's key findings include:

- Extreme weather events continue to be leading contributors to load loss.
- There were no non-weather category 3, 4 or 5 events in 2018.
- Misoperations continue to decline.
- Frequency response continues to improve in all interconnections.
- In Texas, there is still reliability risk in 2019 due to the projected capacity deficit, but better than expected performance from the generation fleet helped meet 2018 summer peak demand.
- Despite continually evolving threats, no cyber or physical security incidents led to unauthorized operational control actions or a loss of load.

CONTACT:
Kimberly.Mielcarek@nerc.net

3353 Peachtree Road NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

- As more inverter-based generation is added, solutions to emerging reliability challenges are being identified.

The report's recommendations include:

- The ERO Enterprise and industry should continue improving their ability to understand, model and plan for a system with a significantly different resource mix. Priority should be given to understanding the implications of the following: frequency response under lower inertia conditions; contributions of inverter-based resources to essential reliability services; increasing protection and restoration system complexities with increased inverter-based resources; and resource adequacy with increasing energy constraints.
- The ERO Enterprise and industry should develop comparative measurements and metrics to understand the different dimensions of resilience (e.g., withstanding the direct impact, managing through the event, recovering from events and preparing for the next event) during the most extreme events and how system performance changes over time.
- The ERO Enterprise and industry should continue to work closely together to understand and share information on cyber and physical security threats and mitigate the risks posed by these threats through a variety of approaches, including resilient system design, consequence-informed planning and operation and practicing response and recovery processes.

Also new in this year's report is a chapter on emerging and known reliability issues highlighted by the Reliability Issues Steering Committee and recommendations made in their February 2018 report. The RISC is an advisory committee to NERC's Board of Trustees that triages and provides front-end, high-level leadership and accountability for issues of strategic importance to bulk power system reliability. The 2018 RISC report provides a framework for prioritizing reliability issues and offers six recommendations to help NERC and industry effectively focus resources on the critical issues needed to best improve the reliability of the bulk power system.

###

The vision for the Electric Reliability Organization (ERO) Enterprise, which is comprised of the North American Electric Reliability Corporation (NERC) and the seven Regional Entities (REs), is a highly reliable and secure North American bulk power system (BPS). Our mission is to assure the effective and efficient reduction of risks to the reliability and security of the grid.